United States Department of Agriculture | Forest Service | Northeastern Area State & Private Forestry | 180 Canfield Street Morgantown, WV 26505

Reply To: 3460

Date: 9/7/93

Ms. Marilyn Parris, Superintendent
Fort Necessity National Battlefield and
Friendship Hill National Historic Site
USDI National Park Service
The National Pike
RD #2, Box 528
Farmington, PA 15437

Dear Marilyn:

On August 25, 1993, USDA Forest Service personnel conducted a gypsy moth egg mass survey at Fort Necessity National Battlefield. The purpose of this survey was to determine gypsy moth population densities and to assess the potential for defoliation and the need for treatment in 1994.

The results of the survey are presented in Table 1. The survey plot locations are shown in Figure 1. In brief, egg mass densities at the Braddock's Grave Area of Fort Necessity ranged from 160-1040 and averaged 600 egg masses per acre. Egg mass densities in the Battlefield Area of the Fort Necessity ranged from 0-2600 and averaged 564 egg masses per acre. The majority of the egg masses at the Battlefield are located in the northern and northeastern portions. Egg mass densities in these portions of the Battlefield ranged from 120-2600 and averaged 980 egg masses per acre. Egg mass densities at the Jumonville Glen Area of Fort Necessity ranged from 0-40 and averaged 20 egg masses per acre.

Egg mass densities are sufficient to cause noticeable defoliation (30-100 percent) at Braddock's Grave and the northern and northwestern portions of the Battlefield (Figure 2). To prevent the defoliation and to reduce gypsy moth populations, we recommend a single application of Bacillus thuringiensis (B.t) at the rate of 30-36 BIUs per acre. Treatment is not necessary in other portions of the Battlefield or at Jumonville Glen since no noticeable defoliation is expected in 1994.

I hope this information will prove useful to you for planning your 1994 suppression activities. Please call Brad Onken or me at 304-285-1541 if you need our assistance or have any questions about this report.

Sincerely,

Rodney L. Whiteman

Rodney L. Whiteman
Forestry Technician

Enclosures

cc: AO
Larry Rhoads
Chuck Smith
Dave Reynolds

RLW/bjm

Table 1.--Gypsy Moth Egg Mass Surveyn Results at Fort Necessity National Battlefield, August 25, 1993.

GRID POINT	AREA	NUMBER EM/ACRE
B A 1	Braddock's Grave	160
B A 3	Braddock's Grave	1040
	Braddock's Grave Range = 160 - 1040 EM/Acre	
	Braddock's Grave Average = 600 EM/Acre	
FC 6	Battlefield	440
FC 10	Battlefield	400
FD 4	Battlefield	160
FD 9	Battlefield	2280
FE 13	Battlefield	440
FF 7	Battlefield	80
FF 9	Battlefield	120
FG 8	Battlefield	80
FH 9	Battlefield	120
FH 10	Battlefield	320
FI 11	Battlefield	120
FI 13	Battlefield	680
FI 15	Battlefield	120
FJ 15	Battlefield	2360
FL 4	Battlefield	0
FL 12	Battlefield	160
FN 5	Battlefield	120
FO 7	Battlefield	120
FO 11	Battlefield	2600
	Battlefield Range = 0-2600 EM/Acre	
	Battlefield Average = 564 EM/Acre	
JA 3	Jumonville Glen	0
JA 5	Jumonville Glen	40
	Jumonville Glen Range = 0-40 EM/Acre	
	Jumonville Glen Average = 20 EM/Acre	

Figure 1. -- Gypsy moth egg mass survey plot locations at Fort Necessity, Jumonville Glen & Braddocks Gravesite, August 25, 1993.

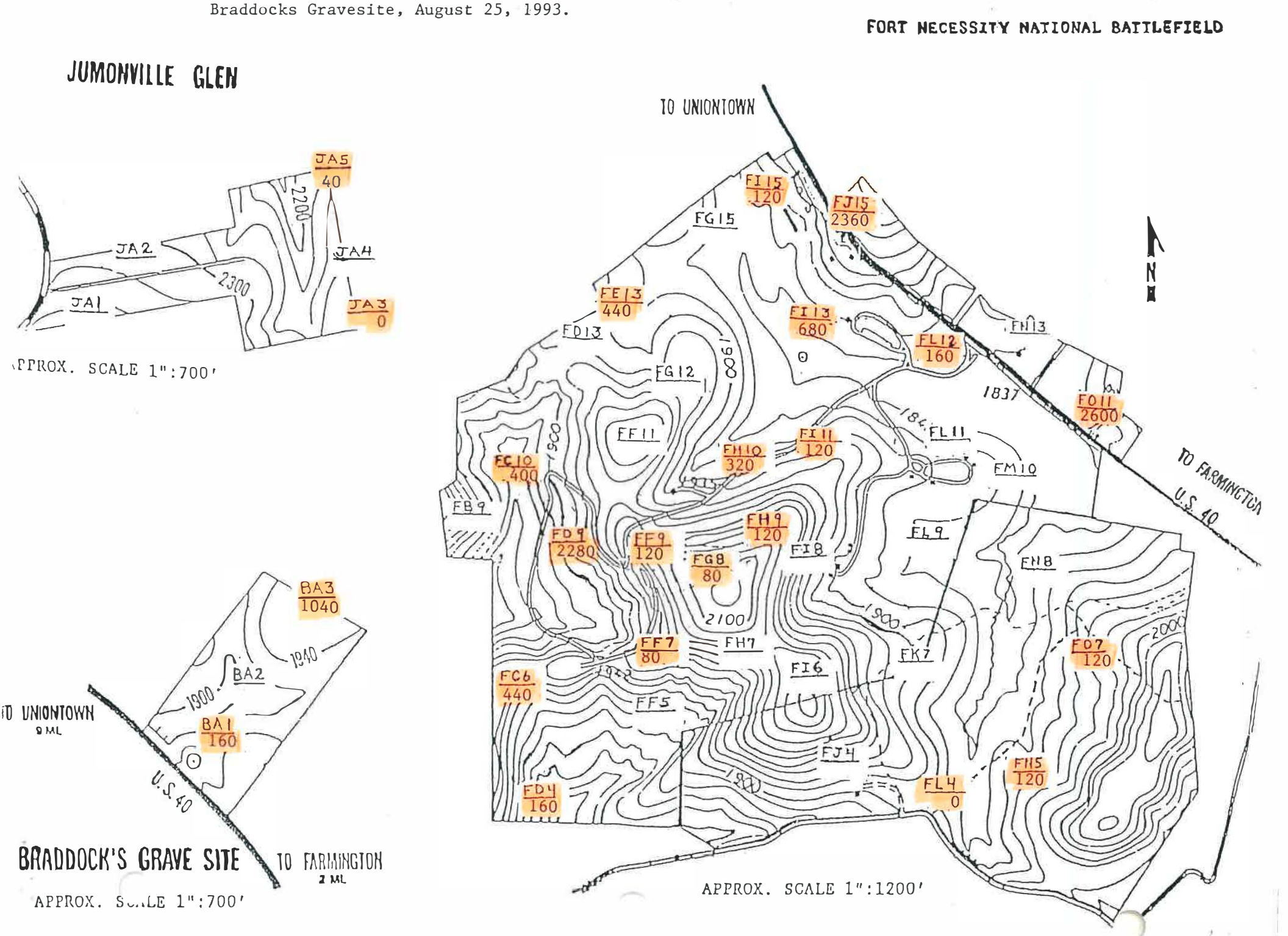

Figure 2.--Expected areas of defoliation at Fort Necessity National Battlefield in 1994.